North Carolina Department of Environment and Natural Resources
Division of Waste Management

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Governor

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Director

John E. Skvarla, III
Secretary

July 16, 2013

Sent Via Email – tbuck@toknc.com

Mr. Thad Buck
Town of Kernersville
Solid Waste Superintendent
P.O. Box 728
Kernersville, NC 27284

Re: *Gas Assessment Plan* and *Groundwater Assessment Report*
Town of Kernersville Closed and Unlined MSW Landfill
Forsyth County
Solid Waste Section Permit Number 34-04
DIN 19310

Dear Mr. Buck:

The Solid Waste Section would like to thank the Town of Kernersville for its continued cooperation in addressing the methane gas exceedances and the groundwater exceedances at the Town of Kernersville Closed and Unlined MSW Landfill.

Gas Assessment Plan (DIN 17952)

The Solid Waste Section approved the Town of Kernersville's *Gas Assessment Plan* dated November 20, 2012 (DIN 17930) on December 20, 2012 (DIN 17952). The new landfill gas monitoring wells were installed on March 8, 2013, and the boring logs were provided to the Solid Waste Section on April 2, 2013 (DIN 19208). Based upon the monthly methane gas results submitted to the Solid Waste Section, there are consistent methane gas exceedances beyond the property boundary. This is a violation of 15A NCAC 13B .0503(2) and the facility's December 10, 1991 Closure Letter. Due to the high risk associated with methane gas migration, *within 60 days of receipt of this letter*, please submit a Methane Gas Corrective Action Plan (CAP). Within this Plan, please provide the results of the methane gas assessment and the Town's proposed actions to stop the migration of the methane gas which is an immediate public health hazard. After the Solid Waste Section approves the Methane CAP in writing, the Town of Kernersville must immediately implement the plan. It is important take all necessary steps to ensure the protection of public health.

Groundwater Assessment Report (DIN 19171)

The Solid Waste Section has completed a review of the *Groundwater Assessment Report* dated May 2013 (DIN 19171) and submitted on behalf of the Town of Kernersville by Joyce Engineering for the Town of Kernersville Closed and Unlined MSW Landfill. Volatile organic compounds (VOCs) have been consistently and historically detected in concentrations exceeding the regulatory groundwater standards within groundwater monitoring wells that are located beyond the facility's compliance boundary.

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The groundwater exceedances are also a violation of the following: 15A NCAC 02L .0103, 15A NCAC 02L .0106, 15A NCAC 02L .0107, 15A NCAC 02L .0108, 15A NCAC 02L .0202, 15A NCAC 13B .0503(2), 15A NCAC 13B .0601, NCGS 143-214.1, and the facility's December 10, 1991 Closure Letter.

Due to the consistent groundwater exceedances, the Town of Kernersville was proactive and submitted a *Groundwater Assessment Plan* dated January 21, 2013 (DIN 18457). The Solid Waste Section approved the plan on February 14, 2013 (DIN 18470). In response to the *Groundwater Assessment Plan*, the Town submitted the *Groundwater Assessment Report.* Based upon a historical review of groundwater quality, a characterization of groundwater flow, a historical review of surface water quality, and a development of a conceptual site model, the Town of Kernersville concludes that groundwater impacts are not migrating beyond the site/property boundaries at this time.

Groundwater Corrective Action

As a result, it appears that the horizontal and vertical extent of the groundwater contamination at the landfill has been completed. However, the detection of constituents in concentrations exceeding the groundwater standards within groundwater monitoring wells beyond the facility's compliance boundary are violations, and groundwater corrective action will be required in the near future.

The Town of Kernersville will be required to select a remedy to restore groundwater quality at and beyond the facility's compliance boundary, to control the migration of contaminated groundwater to prevent unacceptable impacts to the adjacent surface waters and to the adjacent properties, and to reduce the overall groundwater contamination at the facility. *Within one year of receipt of this letter*, please submit a completed groundwater corrective action application selecting a remedy and two contingency plans for this facility. The *North Carolina Solid Waste .0500 Groundwater Corrective Action Application* is conveniently located on our Solid Waste Section Environmental Monitoring webpage at http://portal.ncdenr.org/c/document_library/get_file?uuid=2c45914c-bf33-49e1-9a5e-b54858e46fc0&groupId=38361. After the Solid Waste Section approves the selected remedy and the two contingency plans in writing, a submittal of a Groundwater Corrective Action Plan (CAP) will be required. The Solid Waste Section will review the submitted Groundwater Corrective Action Plan (CAP) and approve, or request additional information prior to its implementation.

Finally, the Solid Waste Section understands that the Town of Kernersville may be overwhelmed with the responsibility of addressing both methane gas and water quality problems after many years since the closure of the facility. However, please continue to be proactive, and please plan your Town's budget accordingly to address these critical post closure care problems. Please begin by focusing on stopping the methane gas migration beyond the facility's property boundary, and please make this the Town's first priority because it is an immediate public health threat.

If you have any questions or concerns regarding this letter, please feel free to contact me by email at jaclynne.drummond@ncdenr.gov or by phone at 919-707-8294. The Solid Waste Section would like to thank you again for your continued cooperation with these critical post closure care matters.

Sincerely,

Jaclynne Drummond
Compliance Hydrogeologist
Solid Waste Section

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cc via email: Jason Watkins, Western District Supervisor
C.T. Gerstell, Environmental Senior Specialist
Larry Hineline, Joyce Engineering

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